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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,712	07/19/2004	Elisabeth Auth	1454.1557	4455
21171	7590	10/05/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PHAM, TUAN	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/501,712	Applicant(s) AUTH ET AL.	
	Examiner TUAN A. PHAM	Art Unit 2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7-19-2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 07/19/2004 has been considered by Examiner and made of record in the application file.

Claim Objections

3. Claims 14 and 17 are objected to because of the following informalities: "dp" should be changed to "data processing". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 8, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallentin (U.S. Patent No.: 6,246,878) in view of Willars et al. (Pub. No.: US 2002/0123348, hereinafter, "Willars").

Regarding claims 8, 18 and 20, Wallentin teaches a base station and a radio communication system, comprising (see figure 2):

a base station to transmit first signals for first communication connections, the first signals being transmitted via an air interface using a first carrier frequency (see figure 2, base station 126-1,1, MS, base station is communicated with MS by using the RF signal which is included a carrier frequency signal for carrying the data to the MS), and to transmit second signals for second communication connections, the second signals being transmitted via the air interface using a second carrier frequency (see figure 2, base station 126-1,1, MS, base station is communicated with MS by using the RF signal which is included a carrier frequency signal for carrying the data to the MS);

a first radio network controller to communicate the first communication connections with the base station (see figure 2, source RNC, base station 126-1,1, col.4, ln.60-67), and

a second radio network controller to communicate the second communication connections with the base station (see figure 2, source RNC, base station 126-1,1, col.4, ln.60-67);

the base station comprising:

a common high-frequency component (read on transceiver) which processes signals of the first communication connections and signals of the second communication connections (see col.8, transceiver in the base station are processing the first and second communication connection, col.8, ln.45-57);

a first communication port and a second communication port, the first communication port being connected to the first radio network controller and the second communication port being connected to the second radio network controller (see figure 2, figure 3a, figure 3b, source RNC 122-1, target RNC 122-2, base station interface comprises a plurality of port for connecting with base station col.5, ln.50-67) wherein

in the base station, the first communication connections are communicated via the first communication port and the second communication connections are communicated via the second communication port (see figure 2, figure 3a, figure 3b, source RNC 122-1, target RNC 122-2, base station interface comprises a plurality of port for connecting with base station col.5, ln.50-67).

It should be noticed that Wallentin fails to teach the base station assigns the first and second communication connections respectively to the first and second communication ports on the basis of connection identifiers provided in data of the first

and second communications connections. However, Willars teaches such features (see [0020, 0054]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Willars into view of Wallentin in order to use the same common ID at the connection as suggested by Willars at column 2, [0020].

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallentin (U.S. Patent No.: 6,246,878) in view of Willars et al. (Pub. No.: US 2002/0123348, hereinafter, "Willars") as applied to claim 8 above, and further in view of Souissi et al (Pub. No.: US 2002/0110189, hereinafter, "Souissi").

Regarding claim 9, Wallentin and Willars, in combination, fails to teaches a radio communication system, wherein the high-frequency component has a send branch and a receive branch, the send branch and the receive branch are connected to an antenna via a duplex filter to split send and receive bands, the send branch comprises a power amplifier, the receive branch comprises a pre-amplifier, and the receive branch has a splitter which is connected to the output of the pre-amplifier and which has two broadband outputs which each cover the complete receive band. However, Souissi teaches such features (see figure 12, antenna 1110, duplexer 1120, power amplifier 1190, LNA 1125, RF splitter 1130, first broadband 1140, second broadband 1150, [0041]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Souissi into view of Wallentin and Willars in order to use the same common ID at the connection as suggested by Willars at column 2, [0020].

7. Claims 10-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallentin (U.S. Patent No.: 6,246,878) in view of Willars et al. (Pub. No.: US 2002/0123348, hereinafter, "Willars") as applied to claim 8 above, and further in view of Souissi et al (Pub. No.: US 2002/0110189, hereinafter, "Souissi") and Hildebrand (Pub. No.: US 2002/0086677).

Regarding claim 10, Wallentin, Willars, and Souissi, fails to teach a radio communication system, wherein the common high-frequency component comprises a first high-frequency branch and a second high-frequency branch, the first high-frequency branch being connected to a first antenna and the second high-frequency branch being connected to a second antenna, the first high-frequency branch and the second high-frequency branch are essentially identical in structure and each have a duplex filter, and signals with the first carrier frequency are sent to the send branch of the first high-frequency branch and signals with the second carrier frequency are sent to the send branch of the second high-frequency branch. However, Hildebrand teaches such features (see figure 6, antenna A, antenna B, duplexer 54, TRX3, TRX5, col.5, [0045-0047]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hildebrand into view of Wallentin, Willars, and Souissi in order to use the same common ID at the connection as suggested by Willars at column 2, [0020].

Regarding claim 11, Hildebrand further teaches a radio communication system wherein the send branch in each case has a combiner to which signals with the first carrier frequency and signals with the second carrier frequency are sent (see figure 6, combiner 60), and Souissi further teaches the output of which is connected to the input of the power amplifier (see figure 12, power amplifier 1190).

Regarding claim 12, Hildebrand further teaches a radio communication system the base station transmits signals to or receives signals from a plurality of sectors, and in which a common high-frequency component is provided in the base station for each sector (see figure 6, plurality of sector CDU3-CDU6).

Regarding claims 13 and 16, Hildebrand further teaches a radio communication system the base station has a plurality of signal processing devices which are employed as a pool, in order to process signals of first communication connections and signals of second communication connections (see figure 6, transceiver TRX3-TRX6).

Regarding claim 15, Hildebrand further teaches a radio communication system the base station transmits signals to or receives signals from a plurality of sectors, and in which a common high-frequency component is provided in the base station for each sector (see figure 6, plurality of sector CDU3-CDU6).

8. Claims 14, 17, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallentin (U.S. Patent No.: 6,246,878) in view of Willars et al. (Pub. No.: US 2002/0123348, hereinafter, "Willars") as applied to claims 8, 18, and 20 above, and further in view of Lockhart (U.S. Patent No.: 6,173,189).

Regarding claims 14, 17, 19, and 21, Wallentin and Willars, in combination, fails to teach the base station has a signal processing device in which data processing programs are provided for processing the signals with the first carrier frequency and the signals with the second carrier frequency, the data processing programs emulating two logical signal processing devices. However, Lockhart teaches such features (see figure 2, demodulation 230 and 232, col.5, ln.1-34.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Lockhart into view of Wallentin and Willars in order to use the same common ID at the connection as suggested by Willars at column 2, [0020].

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In order to expedite the prosecution of this application, the applicants are also requested to consider the following references. Although Oom et al. (U.S. Patent No. 6,738,625), Rinne et al. (U.S. Pub. No. 2003/0190915), Miyatani (U.S. Pub. No. 2002/0128007), and Ahmavaara (U.S. Pub. No. 2004/0252660) are not

Art Unit: 2643

applied into this Office Action; they are also called to Applicants attention. They may be used in future Office Action(s).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (571) 272-7499 and

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Art Unit 2643
September 29, 2005
Examiner

Tuan Pham


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
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